# 長野県産アシナガグモの1新種[1)]

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**Synopsis**

OKUMA, Chiyoko (Entomological Laboratory, Faculty of Agriculture, Kyushu University, Fukuoka, 812, Japan) and Yasunosuke CHIKUNI (4810, Toyoshina, Minami-azumi-gun, Nagano Pref. 399-82, Japan): A new species of the genus *Tetragnatha* (Araneae: Tetragnathidae) from Nagano Pref., Japan. *Acta Arachnol.*, **28**: 1-7 (1978).

In this paper a new species *Tetragnatha shinanoensis* is described from Japan. The new species is known only from mountainous regions of Minami-azumi-gun, Nagano Pref. Biological observation of this new spider is also presented.

筆者の一人千国は，1971年5月，はじめて本種の♂，♀を数個体，長野県南安曇郡堀金村須砂渡で採集した。以来毎年のように5～6月の頃には，同一地帯ならびにその周辺の山地一帯で本種の成体が認められた。新種らしい（八木沼健夫）ということで数年がすぎたが，その後同標本をゆずり受けた大熊が研究の結果新種と認めたので，ここに記載を発表する次第である。

本種は，現在までのところ，同地区からのみ採集されており，かなり特異なアシナガグモと思われるので，千国の観察も合わせて発表する。

本報告に当り，日頃から種々の御配慮や，御指導をいただいている追手門学院大学の八木沼健夫教授に厚く感謝の意を表する。また本文の校閲をしていただき，有益な助言をしていただいた九州大学農学部昆虫学教室の平嶋義宏教授に厚く御礼申し上げる。

## *Tetragnatha shinanoensis* sp. n.

(Japanese name: Shinano-ashinagagumo)

(Figs. 1-13)

Holotype: ♂ (Type No. 2102, Kyushu University), Susado, Horigane-mura,

1) 九州大学農学部昆虫学業績 (Ser. 3, No. 51).

Minami-azumi-gun, Nagano Pref., 30. V. 1974, Y. CHIKUNI leg. Paratopotypes: 2♂♂ and 1♀, same date as holotype; 2♂♂ and 5♀♀, 29. V. 1971; 1♂ and 5♀♀, 28. V. 1977, Y. CHIKUNI leg.

Type depository: The holotype is in the collection of the Entomological Laboratory, Faculty of Agriculture, Kyushu University.

Male. Body length, exclusive of chelicerae 5.1 to 6.0 mm; carapacial length 1.85 to 2.2 mm, width 1.2 to 1.35 mm, abdominal length 3.3 to 3.8 mm, width 1.1 to 1.2 mm.

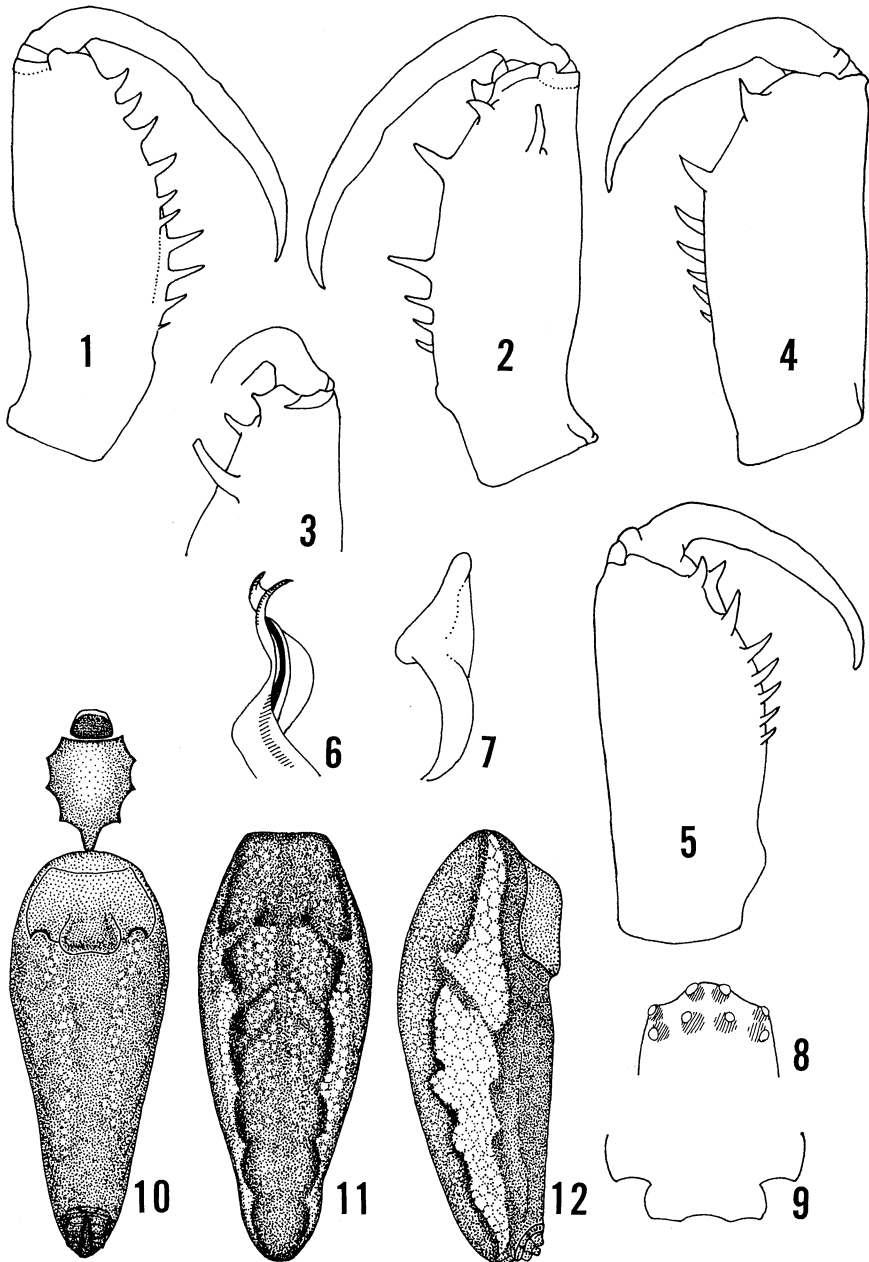
Eyes. Viewed from above, both rows moderately recurved; viewed in front, both rows nearly straight; central ocular quadrangle, wider behind than in front in ratio of 4 : 3.5, slightly wider than long in ratio of 4 : 3.9; diameter of each eye is as follows: AME : ALE : PME : PLE=104 : 73 : 94 : 91 $\mu$; AME separated from one another by their diameter, and from ALE about 1.5 times their diameter; PME separated from one another about 1.8 times their diameter and is separated from PLE about 1.7 times their diameter; lateral eyes separated from one another by diameter of PLE; AME separated from PME by slightly less than their diameter; height of clypeus slightly less than diameter of AME.

Chelicerae. Moderately robust, moderately divergent, length of basal segment 1.1 to 1.25 mm, with a prolateral apophysis; fang moderately slender, slightly sinuous; promargin of fang groove with a "large tooth" about one-third from distal end; a small tooth distal to the large tooth; a series of three to five teeth proximal to "large tooth" diminishing in size; retromargin with a relatively large tooth near base of fang and with additional series of four to six teeth proximal to the latter (Figs. 1-3).

Maxillae. Essentially nearlly parallel but quite concave along outer margin at the beginning of the last third, considerably broadened at distal border, longer than lip in ratio of 23 : 10, more than 3.7 times as long as wide at narrowest level.

Lip. Slightly shorter than wide at base in ratio of 4 : 5; sternal suture gently procurved.

Sternum. Length 1.0 to 1.2 mm, width 0.75 to 0.85 mm; continued between fourth coxae which are separated by about 43 $\mu$.

Palp. Tibia equal or slightly longer than patella; paracymbium, bluntly rounded at its distal end (Fig. 7); both conductor and embolus are somewhat spiraloid and bifurcate terminally (Fig. 6).

Figs. 1-12 *Tetragnatha shinanoensis* sp. n. 1-3. Right chelicerae (male). 4-5. ditto (female). 6. Apical end of conductor and embolus. 7. Paracymbium. 8. Eyes (from above). 9. Genital fold. 10-12. Abdomen (female).

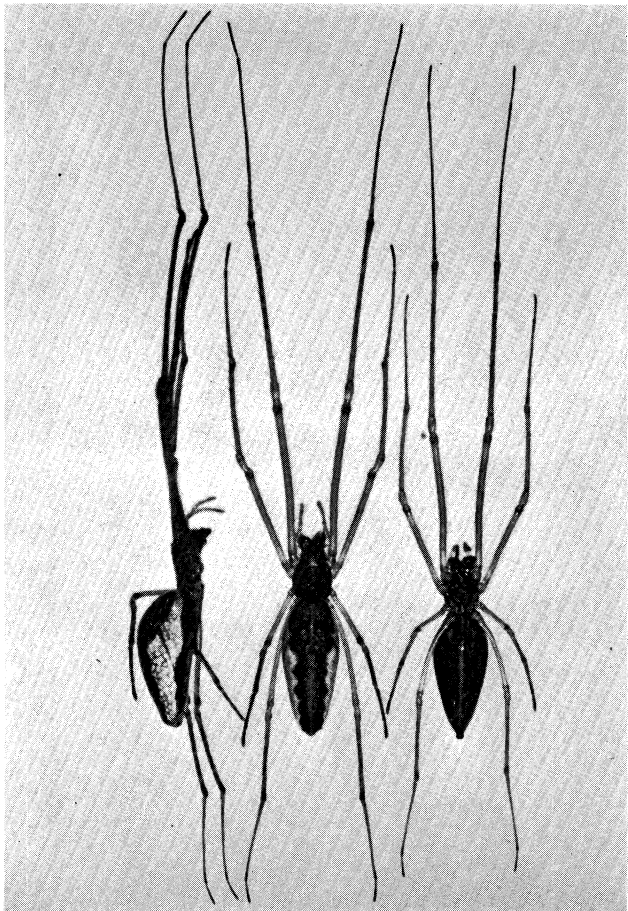



Fig. 13. *Tetragnatha shinanoensis* sp. n. ♀

Legs. 1 2 4 3.

| | Femora | Patellae | Tibiae | Metatarsi | Tarsi | Total |
|---|---|---|---|---|---|---|
| | (All measurements in millimeters) | | | | | |
| 1 | 5.52±0.34 | 0.84±0.05 | 6.30±0.48 | 6.81±0.54 | 1.49±0.11 | 20.96±1.49 |
| 2 | 3.90±0.54 | 0.71±0.04 | 3.63±0.21 | 3.62±0.21 | 1.01±0.04 | 12.87±0.89 |
| 3 | 1.98±0.15 | 0.46±0.04 | 1.25±0.06 | 1.40±0.07 | 0.58±0.05 | 5.66±0.25 |
| 4 | 3.53±0.27 | 0.58±0.04 | 2.92±0.18 | 3.20±0.17 | 0.85±0.05 | 11.08±0.63 |
| Palp | 0.93±0.04 | 0.28±0.04 | 0.31±0.02 | / | 0.82±0.04 | 2.34±0.09 |

Color in alcohol. Legs, palps, chelicerae, carapace and maxillae yellowish brown throughout; lip, dark brown with distal yellowish border; sternum,

center yellowish brown and along margin dusky brown; abdomen, essentially as in Female.

Female. Body length, exclusive of chelicerae 5.9 to 7.3 mm; carapacial length 2.0 to 2.3 mm, width 1.25 to 1.5 mm; abdominal length 3.9 to 5.1 mm, width 1.5 to 2.0 mm.

Eyes. Essentially as in male (Fig. 8), except for structures of eyes; central ocular quadrangle, wider behind than in front in ratio of 4; 3.4; slightly wider behind than long in ratio of 4 : 3.7; diameter of each eye as follows: AME : ALE : PME : PLE =111 : 75 : 99 : 94 $\mu$; AME separated from one another by slightly more than their diameter, and from ALE about 1.6 times their diameter; PME separated from one another about 1.8 times their diameter and is separated from PLE about 1.7 times as long as their diameter; lateral eyes separated from one another by slightly more than diameter of PLE; AME separated from PME by slightly less than diameter of AME; height of clypeus about 0.6 times as long as diameter of AME.

Chericerae. Moderately robust, length of basal segment 0.95 to 1.1 mm; fang only slightly sinuate, without cusps; promargin of fang groove with five to seven teeth, retromargin also with five to seven teeth (Figs. 4 and 5).

Legs. 1 2 4 3.

| | Femora | Patellae | Tibiae | Metatarsi | Tarsi | Total |
|---|---|---|---|---|---|---|
| | | | (All measurements in millimeters) | | | |
| 1 | 5.42±0.34 | 0.93±0.09 | 6.15±0.49 | 6.36±0.53 | 1.48±0.09 | 20.34±1.44 |
| 2 | 3.68±0.21 | 0.78±0.08 | 3.45±0.29 | 3.50±0.22 | 1.00±0.05 | 12.41±0.79 |
| 3 | 2.00±0.13 | 0.48±0.07 | 1.27±0.11 | 1.38±0.11 | 0.63±0.04 | 5.76±0.39 |
| 4 | 3.71±0.28 | 0.59±0.05 | 2.95±0.20 | 3.19±0.22 | 0.85±0.06 | 11.28±0.69 |
| Palp | 0.86±0.09 | 0.26±0.05 | 0.48±0.05 | / | 0.82±0.06 | 2.42±0.17 |

Genital fold. As shown in figure 9.

Color in alcohol. Abdomen with a brown stripe dorsally and white stripe laterally; the latter is composed of a large number of white scales; venter brown. Others essentially as in male.

*T. shinanoensis* sp. n. is strikingly different from all other known Oriental species of *Tetragnatha* by its bifurcate structure (Fig. 6) of the male embolus and conductor.

Table 1. Measurements of body, carapace, sternum, abdomen, chelicerae, maxillae, lip and eyes of *Tetragnatha shinanoensis* sp. n.

| Sex | ♂ | | ♀ | |
|---|---|---|---|---|
| No. of specimens examined | 6 | | 10 | |
| | mean±s. d. | (range) | mean±s. d. | (range) |
| Body length (mm) | 5.47±0.31 | (5.1-6.0) | 6.75±0.45 | (5.9-7.3) |
| Carapace, length | 2.02±0.13 | (1.85-2.2) | 2.11±0.11 | (2.0-2.3) |
| width | 1.28±0.07 | (1.2-1.35) | 1.37±0.09 | (1.25-1.5) |
| Sternum, length | 1.06±0.08 | (1.0-1.2) | 1.12±0.05 | (1.05-1.2) |
| width | 0.80±0.03 | (0.75-0.85) | 0.87±0.06 | (0.8-0.95) |
| Abdomen, length | 3.52±0.20 | (3.3-3.8) | 4.69±0.38 | (3.9-5.1) |
| width | 1.15±0.04 | (1.1-1.2) | 1.82±0.15 | (1.5-2.0) |
| Chelicera, length | 1.19±0.06 | (1.1-1.25) | 1.04±0.06 | (0.95-1.1) |
| Maxilla, length (μ) | 750±44.7 | (700-800) | 788±60.4 | (700-875) |
| width | 204±18.8 | (175-225) | 234±11.9 | (225-250) |
| Lip, length | 329±36.8 | (275-375) | 345±32.4 | (300-375) |
| width (Base) | 429±39.3 | (400-500) | 455±25.8 | (425-500) |
| Eye diameter | | | | |
| AME | 104±6.7 | (100-113) | 111±9.3 | (100-125) |
| ALE | 73±5.3 | (62-75) | 75±6.7 | (63-88) |
| PME | 94±5.4 | (88-100) | 99±9.2 | (88-113) |
| PLE | 91±5.2 | (88-100) | 94±6.3 | (88-100) |

### シナノアシナガグモ（新称）*Tetragnatha shinanoensis* sp. n. のおもな特徴

体長♂5.1～6.0mm，♀5.9～7.3mm．一見ミドリアシナガグモ（*T. pinicola*）やハラビロアシナガグモ（*T. extensa*）に似ているが，これらのクモの腹部下面は，正中部に黒色縦条があり，その両側が銀色であるのに対し，本種の腹部下面は全面黒褐色で，腹部側方に Fig. 12 または Fig. 13でみられるような銀白色縦斑がはしっている。この銀白色縦斑は鮮やかで，ミドリアシナガグモやハラビロアシナガグモのみならず，他の日本産のアシナガグモとも一見して区別できる。また embolus and conductor の先端が二叉している（Fig. 6）．

### シナノアシナガグモの生態

1. 生　息　場　所

長野県南安曇郡堀金村須砂渡，並びに同郡穂高町，三郷村の山地一帯．

2. 生　活　環　境

北アルプス山麓の標高800m 前後の山地の雑木林にすむ。アシナガグモ科の他の多くの種が，水辺や水上に網を張って生活するのと異り，本種は水辺とは無関係である。個体数は少ない方ではな

い。普通種に近いともいえる。ただし，この安曇野の限られた地域（局地）以外では，長野県下は勿論，県外の他の地域でも，末だに一頭も採集されたことがない。

3. 造 網 と 捕 食

雑木の下枝（地上数10cm 前後）に水平に近い丸網を張り，一見，ミドリアシナガグモによく似ている。林内の小動物を捕食している。

4. 生　活　史

年1世代で，5月中旬～6月中旬に成体になる。その頃産卵，ふ化した幼体は，10月中旬～11月中旬に亜成体となり，そのままで越冬し，翌年の初夏に成体となる。本種の生活史については，数年間，年間を通じて調査したが，その結果，5～6月以外の季節に成体をみかけることはなかった。

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追記・本報を脱稿後，現在ドイツに留学中の小野展嗣氏よりゆずり受けたアシナガグモの1♀が本種であることを確認した。deta は次の通りである。長野県小県郡真田町軽井沢泉の里， 1. VI. 1976，小野展嗣採集。新産地としてこゝに追記し，同小野展嗣氏に対して心から御礼申しあげる。